Commonwealth of Kentucky
Division for Air Quality

RESPONSE TO COMMENTS

ON THE CONDITIONAL MAJOR DRAFT PERMIT F-05-051
NOVEON, INC.
2468 INDUSTRIAL PKWY, CALVERT CITY, KY 42029
NOVEMBER 31, 2006
RALPH GOSNEY, P.E., REVIEWER
SOURCE ID: 21-157-00060
AGENCY INTEREST #: 46166
ACTIVITY ID: APE20040001

SOURCE DESCRIPTION:

An application for a Conditional Major operating permit, F-05-051, for the Noveon, Inc. Carbopol® facility, a specialty chemical manufacturing plant, located in Calvert City, Kentucky, was received on December 19, 2003. To account for new insignificant activities at the plant and to provide greater clarity in response to DAQ queries on the December 2003 application, a revised application was submitted on March 14, 2006.

Carbopol®, a synthetic thickener, is produced at the facility in a carrier, which may be benzene, ethyl acetate or cosolvent (a mixture of ethyl acetate and cyclohexane). Raw materials are charged to batch polymerizers which empty into blowdown tanks upon completion of the polymerization process. The material is then dried and packaged. Carriers which are used to produce Carbopol® are recovered and recycled back through the process. A carbon bed adsorption system is used for benzene recovery, whereas the other carriers are recovered using refrigerated condensers. The carbon bed also serves to control emissions from equipment in benzene service. A thermal oxidizer is used to control emissions from equipment in ethyl acetate and cosolvent service, along with most storage tanks and the wastewater treatment plant. The thermal oxidizer is a control device that is secondary to the regenerative carbon beds for processes that use benzene as a carrier. Noveon, Inc. has accepted permit conditions to limit the facility's potential to emit (PTE) below major source thresholds, and the source is classified as a "nonmajor source" pursuant to 401 KAR 52 and 40 CFR 70. Therefore, the source is subject to the provision of 401 KAR 52:030.

PUBLIC AND U.S. EPA REVIEW:

On October 17, 2006, the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in *The Benton Marshall County Tribune* in Marshall County, Kentucky. The public comment period expired 30 days from the date of publication.

Comments were received from Rick Brinly, the Plant Manager of Noveon, Inc., on November 27, 2006. Attachment A to this document lists the comments received and the Division's response to each comment. Minor changes were made to the permit as a result of the comments received, however, in no case were any emissions standards, or any monitoring, recordkeeping or reporting requirements relaxed, except as stated herein. Please see Attachment A for a detailed explanation of the changes made to the permit.

ATTACHMENT A
RESPONSE TO COMMENTS

Comments on the draft Conditional Major operating permit for Noveon, Inc. submitted by Rick Brinly, Plant Manager:

Conditional Major Permit- Section B (Emission Points, Emission Units, Applicable Regulations, and Operating Conditions)

1. C01 Maximum Hourly Rate: (this comment applies to all C01 emission units, pages 2-4 of 73)

   Remove the maximum hourly rates for each of the emission units. Maximum hourly rates are not appropriate for emission units of the Carbopol® Production Unit because, with the exception of the spray dryer, they operate on a batch basis. As such, an hourly rate would be difficult to monitor and would not provide a number that would relate to emission limits. The maximum hourly rates in the draft permit for each unit appear to have been derived from the maximum Carbopol® production using each of the three carrier solvents, divided by 8,760 hours per year. Accordingly, this number would represent an average hourly rate, rather than a maximum rate. Practical enforceability is ensured by continuous monitoring of the control equipment, the regenerative carbon absorber and the thermal oxidizer, as well as the monthly calculation of 12-month rolling totals of Carbopol® production for each carrier solvent.

   Division's response: The Division concurs that the "maximum hourly production rates" specified in the Statement of Basis and permit facility descriptions are based on maximum annual production rates averaged over 8,760 hours, rather than short-term maximum hourly rates. The Division does not agree, however, that such descriptive information should be removed from the permit. Instead, the previously specified maximum hourly rate for each of the emission units in the Statement of Basis and permit have been replaced with either the Maximum Annual Design Rate that Noveon, Inc. provided in their potential to emit calculations or the Maximum Operating Limitations based on the production limits shown below. These revisions are descriptive in nature and do not affect other conditions of this permit.

   7,000 tons Carbopol® polymer per year using benzene carrier
   6,000 tons Carbopol® polymer per year using ethyl acetate carrier
   11,278 tons Carbopol® polymer per year using ethyl acetate-cyclohexane carrier

2. C01 Control Equipment: (this comment applies to C01 (01), (02), (03), (05), (06), and (07), pages 2-4 of 73)

   Make the following text change (additions in bold and deletions with a strikethrough): "…when the TO is ~~shutdown for maintenance~~**not operational** – not to exceed 1,927 hours…"

This language is consistent with the language for C01 (09) and (10) and is more accurate because the TO may shut down automatically for reasons other than maintenance, such as a temperature excursion.

Division's response: The Division concurs with the comment and has revised the permit as requested.

3. C01 (02) Description: (page 2 of 73)

Change the text to: Nineteen (19) Polymerizers

Division's response: The Division concurs with the comment and has revised the permit as requested.

4. C01 (07) Construction Date: (page 3 of 73)

Change the text to: 1991

Division's response: The Division concurs with the comment and has revised the permit as requested.

5. C01 Carbopol Production Unit: (page 4 of 73)

Please add a section called Non-Applicable Regulations and add the following text (additions in bold and deletions with a strikethrough): **The provisions of 40 CFR 63, Subpart FFFF, Miscellaneous Organic NESHAP (MON) do not apply because the facility's potential to emit of hazardous air pollutants is less than ten (10) tons per year.**

Division's response: The Division has revised the permit as follows:

NON-APPLICABLE REGULATIONS:
The provisions of 40 CFR 63, Subpart FFFF, Miscellaneous Organic NESHAP (MON) do not apply because the source-wide emissions of hazardous air pollutants are limited to less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for combined HAPs.

6. C01 1. Operating Limitations: iii. (page 4 of 73)

Make the following text change (additions in bold and deletions with a strikethrough): "The total amount of Carbopol® produced using cosolvent (ethyl acetate-cyclohexane) as a carrier shall not exceed ~~12~~**22.556** million pounds per consecutive twelve (12) month period."

Division's response: The Division concurs with the comment and has revised the permit as suggested by the source as this is a typographical error. The correct limit of Carbopol® produced using cosolvent (ethyl acetate-cyclohexane) as a carrier should be 22.556 million pounds per consecutive twelve (12) month period. This limit was correctly stated in the Statement of Basis and this limit was used when calculating the limited source-wide potential to emit. There are no other changes to the permit due to this comment.

7. C01 6. Specific Reporting Requirements: (page 5 of 73)

Make the following text change (additions in bold and deletions with a strikethrough):
"The permittee shall report **whether** the consecutive 12-month production of Carbopol® ~~in accordance with 5. Specific Recordkeeping Requirements~~ **complies with** 1. Operating Limitations as part of the semiannual reporting required in Section F.5 and F.6."

Actual production rates are considered by Noveon to be a trade secret. Revealing actual production rates might provide competitors an unfair advantage. Actual 12-month production rates recorded per **5. Specific Recordkeeping Requirements** will be maintained onsite for inspection by the Division.

Division's response: While the Division acknowledges the proprietary nature of the actual plant production rates, the Division disagrees with the comment made by the permittee. The permittee is required to report actual production rates in order to demonstrate that the source-wide emissions are less than Part 70 major source thresholds and that the source is in compliance with 401 KAR 52:030, Federally-Enforceable Permits for Non-Major Sources. Additionally, the actual production rates are required in order to complete the Kentucky Emission Inventory Statements (KYEIS) as required by permit Section F (10). The requisite production rates can be submitted to the Division as "Privileged and Confidential and Not for Public Review" in accordance with 400 KAR 1:060. Such information will be handled by the Division accordingly. There have been no changes to the permit as a result of this comment.

8. C02 Maximum Hourly Rate: (this comment applies to all C02 emission units, pages 6 and 12 of 73)

Remove the maximum hourly rates for each of the emission units. These emission units are support units for the Carbopol® Production Unit. Maximum hourly rates are not appropriate for emission units because the operation of these units is dependant upon production from the Carbopol® Production Units, which are batch processes. As such, an hourly rate would be difficult to monitor. The maximum hourly rates in the draft permit for each unit appear to have been derived from the maximum annual rates, divided by 8,760 hours per year. Accordingly, this number would represent an average hourly rate, rather than a maximum rate. Practical enforceability is ensured by continuous monitoring of the control equipment, the regenerative carbon absorber and the thermal oxidizer, as well as the monthly calculation of 12-month rolling totals of Carbopol® production for each carrier solvent.

Division's response: The Division concurs that the "maximum hourly production rates" specified in the Statement of Basis and permit facility descriptions are based on maximum annual production rates averaged over 8,760 hours, rather than short-term maximum hourly rates. The Division does not agree, however, that such descriptive information should be removed from the permit. Instead, the previously specified maximum hourly rate for each of the emission units in the Statement of Basis and permit have been replaced with either the Maximum Annual Design Rate that Noveon, Inc. provided in their potential to emit calculations or the Maximum Operating Limitations based on the production limits shown below. These revisions are descriptive in nature and do not affect other conditions of this permit.

9. C02 Control Equipment: (this comment applies to C02 (01), (02), (03), (04), and (05 to 11), pages 6 and 12 of 73)

Make the following text change (additions in bold and deletions with a strikethrough): "…when the TO is ~~shutdown for maintenance~~**not operational** – not to exceed 1,927 hours…"

This language is consistent with the language for other emission units and is more accurate because the TO may shut down automatically for reasons other than maintenance, such as a temperature excursion.

Division's response: The Division concurs with the comment and has revised the permit as requested.

10. C02 Benzene Storage Tanks and Recovery Systems (Support for C01 Process): (page 7 of 73)

Add a section called Non-Applicable Regulations and add the following text to page 6 of 73 (additions in bold and deletions with a strikethrough): **401 KAR 57:002, which incorporates by reference 40 CFR 61, Subpart BB, Benzene Transfer Operations, is not applicable to these benzene waste operations because the facility is not a benzene production facility or a bulk terminal, as defined in 40 CFR 61.301.**

Division's response: The Division concurs with the comment and has revised the permit as requested.

11. C02 4. Specific Monitoring Requirements: a. (page 8 of 73)

Make the following text change (additions in bold and deletions with a strikethrough): "Pursuant to 40 CFR 61.272(c) and the operating plan submitted to the U.S.E.P.A. on December 13, 1989 (~~revision submitted on December 20, 1989~~**and subsequent revisions**), the permittee shall…"

Division's response: The Division concurs with the comment and has revised the permit as requested.

12. C06 Maximum Hourly Rate: (this comment applies to all C06 emission units (pages 35 and 36 of 73)

Remove the maximum hourly rates for each of the emission units. Maximum hourly rates are not appropriate for emission units of the Benzene Waste Operations because the process equipment operates, with few exceptions, on a batch process. As such, an hourly rate would not be a quantity that could be practically monitored. These units are dependant upon the production of the Carbopol® Production Unit. Also, the operating rate of the SUMPS unit is dependant upon the rate of rainfall, which is not predictable on an hourly basis. The maximum hourly rates in the draft permit appear to be average hourly rates, rather than maximum rates. Practical enforceability is ensured by continuous monitoring of the main control equipment, the regenerative carbon absorber and the thermal oxidizer, as well as the monthly calculation of 12-month rolling totals of Carbopol® production for each carrier solvent as well as a maximum annual rate for the SUMPS unit.

Division's response: The Division concurs that the "maximum hourly production rates" specified in the Statement of Basis and permit facility descriptions are based on maximum annual production rates averaged over 8,760 hours, rather than short-term maximum hourly rates. The Division does not agree, however, that such descriptive information should be removed from the permit. Instead, the previously specified maximum hourly rate for each of the emission units in the Statement of Basis and permit have been replaced with either the Maximum Annual Design Rate that Noveon, Inc. provided in their potential to emit calculations or the Maximum Operating Limitations based on the production limits shown below. These revisions are descriptive in nature and do not affect other conditions of this permit.

13. C06 Control Equipment: (this comment applies to C06 (01), (02), (03), (04), and (05), page 35 of 73)

Make the following text change (additions in bold and deletions with a strikethrough): "…when the TO is ~~shutdown for maintenance~~**not operational** – not to exceed 1,927 hours…"

This language is consistent with the language for other emission units and is more accurate because the TO may shut down automatically for reasons other than maintenance, such as a temperature excursion.

Division's response: The Division concurs with the comment and has revised the permit as requested.

14. C06 Applicable Regulations: (page 36 of 73)

The summarization of the applicable regulation (401 KAR 57:002, which incorporates 40 CFR 61, Subpart FF by reference) does not correspond to the actual requirements of the regulation. Section 61.340 establishes applicability for two separate types of facilities: (a) chemical manufacturing plants and (b) treatment, storage and disposal facilities (TSDF) that treat wastes from chemical manufacturing plants. As the draft permit currently reads, it implies that the requirements apply only to chemical manufacturing plants that operate a TSDF, which is an inaccurate summarization of the applicability requirements for the *National Emission Standard for Benzene Waste Operations.* Also, please add the requirements of 40 CFR 61.340(c) and 40 CFR 61.340(d) to clarify which wastes that are exempt from 40 CFR 61, Subpart FF. Under Applicable Regulations please make the following changes (referring to 40 CFR 61, Subpart FF) (additions in bold and deletions with a strikethrough):

APPLICABLE REGULATIONS:

401 KAR 57:002, *Hazardous Pollutants*, which incorporates by reference 40 CFR 61, Subpart FF, *National Emission Standards for Hazardous Air Pollutants for Benzene Waste Operation*s. 40 CFR 61, Subpart FF applies to owners and operators of chemical manufacturing plants~~, that operate a hazardous waste treatment, storage, and disposal facilities that treat, store, or dispose of hazardous waste generated by a chemical manufacturing plant. The waste streams at hazardous waste treatment, storage, and disposal facilities subject to the provisions of 40 CFR 61, Subpart FF are the benzene-containing hazardous waste. A hazardous waste treatment, storage, and disposal facility is a facility that must obtain a hazardous waste management permit under subtitle C of the Solid Waste Disposal Act~~.

In accordance with 40 CFR 61.340(c), at each facility identified above, the following waste is exempt from the requirements of this subpart:

1. Waste in the form of gases or vapors that is emitted from process fluids;
2. Waste that is contained in a segregated stormwater sewer system.

In accordance with 40 CFR 61.340(d), at each facility identified above, any gaseous stream from a waste management unit, treatment process, or wastewater treatment system routed to a fuel gas system, as defined in 40 CFR 61.341, is exempt from this subpart. No testing, monitoring, recordkeeping, or reporting is required under this subpart for any gaseous stream from a waste management unit, treatment process, or wastewater treatment unit routed to a fuel gas system.

Division's response: The Division concurs with the comment and has revised the permit as requested.

15. C06 6. Specific Reporting Requirements: a. (page 44 of 73)

Add text for the following regulations to this section: 40 CFR 61.357(a)(1) (additions in bold and deletions with a strikethrough): **Total annual benzene quantity from facility waste determined in accordance with 40 CFR 61.355(a) of this subpart.**

Division's response: The Division concurs with the comment and has revised the permit (addition of 6.a.(i)) as requested since this provision of the rule was inadvertently omitted from the draft permit.

16. C07 (02) Construction Date: (page 46 of 73)

Change the text to: 2005

Division's response: The Division concurs with the comment and has revised the permit as requested.

17. C08 1. Operating Limitations: (page 48 of 73)

Make the following text change under Compliance Demonstration Method (additions in bold and deletions with a strikethrough): "All reasonable measures shall be taken to prevent particulate matter from becoming airborne at all times. These measures shall include, but are not limited to the following:

The permittee shall perform regular cooling tower maintenance as recommended by the vendor ~~to assure that the manufacturer specified drift loss of 0.089% of recirculating water is maintained at all times~~."

It has come to the attention of Noveon that the drift loss of the cooling tower is not a quantity that is measurable by Noveon. Therefore, it is not appropriate to include the design drift loss value in the permit. A review of other Kentucky permits that include cooling towers (e.g. Atophina, ISP Chemicals, Westlake) indicate that drift loss, and in fact, compliance demonstrations, have not been included for cooling towers in the permits for these other facilities.

Division's response: The source is not required to demonstrate that the drift loss is in fact 0.089% (or less) of recirculating water. The source must simply perform regular maintenance of the cooling tower as recommended by the manufacturer. Compliance with the requirement to conduct routine maintenance is deemed to result in compliance with the particulate matter limit. The permit was modified as requested.

Conditional Major Permit- Section C (Insignificant Activities)

18. Item # 20: (page 51 of 73)

Make the following text change under Insignificant Activities (additions in bold and deletions with a strikethrough): "Pipe and equipment leak emissions for ~~waster water~~**wastewater** treatment, F2 (~~pumps (11); relief devices (7); valves (314); flanges (1,207)~~**total components 1,693**)"

Division's response: The Division concurs with the comment and has revised the permit as requested.

19. Item # 21: (page 51 of 73)

Make the following text change under Insignificant Activities (additions in bold and deletions with a strikethrough): "Pipe and equipment leak emissions for surfactant storage, F8 (~~flanges (64)~~(**total components 70**)"

Division's response: The Division concurs with the comment and has revised the permit as requested for insiginificant activity #20.

20. Item # 22: (page 51 of 73)

Make the following text change under Insignificant Activities (additions in bold and deletions with a strikethrough): "Initiator ~~change~~**charge** tank (TK-6C) capacity 100 gal"

Division's response: The Division concurs with the comment and has revised the permit as requested insiginificant activity #22.

21. Item # 48: (page 53 of 73)

Make the following text change under Insignificant Activities (additions in bold and deletions with a strikethrough): "Copolymer charge tank (TK-4C) capacity: ~~40~~**170** gal"

Division's response: The Division concurs with the comment and has revised the permit as requested insiginificant activity #48.

22. Item # 80: (page 55 of 73)

Make the following text change under Insignificant Activities (additions in bold and deletions with a strikethrough): "Pipe and equipment leak emissions for allyl chloride storage, F4 (~~pumps (2); relief devices (3); valves (39); and flanges (156)~~**total components 220**)"

Division's response: The Division concurs with the comment and has revised the permit as requested insiginificant activity #80.

23. Item # 81: (page 55 of 73)

Make the following text change under Insignificant Activities (additions in bold and deletions with a strikethrough): "Pipe and equipment leak emissions for Specialty Additive System, F5 (~~Pumps (3); relief devices (6); valves (50); and flanges (200)~~**total components 285**)"

Division's response: The Division concurs with the comment and has revised the permit as requested insiginificant activity #81.

24. Item # 82: (page 55 of 73)

Make the following text change under Insignificant Activities (additions in bold and deletions with a strikethrough): "Pipe and equipment leak emissions for hazardous waste tank and lines, F6 (~~pumps (2); relief devices (3); valves (60); and flanges (240)~~**total components 336**)"

Division's response: The Division concurs with the comment and has revised the permit as requested insiginificant activity #82.

Conditional Major Permit- Section D (Source Emission Limitations and Testing Requirements)

25. 3. Source Emission Limitations: Compliance Demonstration Method: a. ii. (page 57 of 73)

Make the following text changes (additions in bold and deletions with a strikethrough): "All emission calculations shall be based on acceptable chemical engineering references, including**, but not limited to,** Perry's Chemical Engineers' Handbook…"

Division's response: The Division concurs with the comment and has revised the permit as requested.

26. 3. Source Emission Limitations: Compliance Demonstration Method: b. (page 57 of 73)

Remove this requirement to model for air toxics. This subject was addressed in our response to Notice of Deficiency #3 and comments on the pre-draft permit, dated August 15, 2006. Our comments at that time were based on a telephone conversation with Ralph Gosney of DAQ and resulted in agreement that modeling for air toxics at this time was unnecessary because of pending air toxic regulations. In addition, previous air toxic modeling for cyclohexane and ethyl acetate indicated that allowable emissions of these two pollutants were 1,181 lbs/hr and 1,814 lbs/hr respectively – much higher than the potential emissions of the facility for these chemicals. The facility currently operates under a NESHAP for benzene, and Noveon believes that if a BACT analysis were performed, the existing control equipment (regenerative carbon absorber and thermal oxidizer) for the benzene emitting units would easily be considered BACT.

Division's response: The Division generally concurs with the comment and acknowledges the conversation with the permittee. This notwithstanding, the Division does not agree with request to remove the requirement; rather, the condition has been revised to reflect the need to ensure ongoing compliance with the applicable rule.

Demonstration of compliance with the requirements of 40 CFR Part 61, as specified in Section B of this permit, shall also serve as the demonstration of compliance with the air toxic limitation in paragraph 3.b. above. If the permittee alters process rates, material formulations, or any other factor that would result in an increase of HAP emissions or the addition of HAP emissions not previously evaluated by the Division, the source shall submit the appropriate application forms pursuant to 401 KAR 52:020. The source may perform a screening analysis of the potential to emit of applicable toxic pollutant emissions at the plant and compare it to established benchmarks (i.e. Reference Concentrations (RfCs), Unit Risk Estimates (UREs), as applicable).

27. 4. Source Testing Requirements: b. (page 58 of 73)

Remove this requirement to conduct leak detection and repair immediately prior to a performance test. This would be an unnecessary burden on Noveon and would not have a significant affect on the performance test. Noveon routinely performs leak detection and repair in accordance with 40 CFR 61, Subpart V, as stipulated in Section B, for piping and equipment in benzene service. Piping and equipment in ethyl acetate and cosolvent service are not subject to Subpart V requirements. Currently, due to the number of components in benzene service, parts of the plant are tested on different schedules, so it would be difficult to schedule the performance test after completion of the leak detection and repair. Historically, very few component leaks have been detected and Noveon does not believe that the minor leaks that may exist in some components between scheduled leak detection and repair would measurably reduce the loading to the regenerative carbon beds. The thermal oxidizer also receives vapors from equipment in ethyl acetate and cosolvent services as well as benzene service and the effect of minor leaks in the benzene components would therefore be even smaller than in the regenerative carbon system. Therefore, the effect of minor leaks of components in benzene service on the performance test of the regenerative carbon system would be negligible and most likely immeasurable.

Division's response: Since monthly leak detection and repair are required for piping and equipment in benzene service pursuant to 40 CFR 61, Subpart V and since the application indicates that most of the equipment in the Carbopol® production process can be used for any of the three carrier services, the Division has determined that it is not necessary to require additional leak detection and repair for the same piping and equipment used in ethyl acetate and cosolvent service. The permit has been revised to remove ***4. Source Testing requirements: b.***

28. 5. Source Monitoring Requirements: c. (page 58 of 73)

Noveon would like to clarify that "continuously monitor" refers to monitoring at least once every 15 minutes (as found in some NESHAPs, such an 40 CFR 63, Subpart FFFF, Miscellaneous Organic NESHAP (MON). The analyzer currently used for benzene analysis in the vent system at the carbon system exit can not sample more frequently than about once per 90 seconds.

Division's response: The Division acknowledges the comment. A monitoring frequency of at least once every 15 minutes is an acceptable monitoring interval to satisfy the requirements of ***5. Source Monitoring Requirements: c.***

29. 5. Source Monitoring Requirements: c. (page 58 of 73)

Make the following text change (additions in **bold** and deletions with a ~~strikethrough~~):
"The permittee shall continuously monitor the concentration **of benzene** and flow rate ~~of benzene~~ downstream of the regenerative carbon bed by using a computerized distributed control system (DCS)."

Division's response: The Division concurs with the comment and has revised the permit as requested.

30. 5. Source Monitoring Requirements: d. and e. (page 58 of 73)

Remove these two requirements. The requirements to monitor regeneration time and steam flow for the regenerative carbon beds are redundant and unnecessary because of the requirement in **5. Source Monitoring Requirements: c.** to monitor concentration and flow rate of benzene downstream from the carbon beds.

Division's response: The Division concurs with the comment and has revised the permit as requested by the permittee. Since the permittee is required to continuously monitor the concentration of benzene and flow rate downstream of the regenerative carbon beds, it is unnecessary to additionally monitor the regeneration time and steam flow, as the benzene concentration downstream of the carbon beds is used as an indicator of the performance of the control device and as an indicator of the overall performance of the system.

31. 6. Specific Recordkeeping Requirements: a**.** (page 59 of 73)

Make the following text change (additions in **bold** and deletions with a ~~strikethrough~~):
"The permittee shall keep records of the monthly and consecutive 12-month Carbopol® production when using each of benzene, ethyl acetate and cosolvent as the respective carriers; and actual computed VOC and HAP emissions. Records shall be available within 30 days of the end of each month. The permittee shall keep records of each incident when VOC and HAP emissions are not controlled by the thermal oxidizer, including periods that the oxidizer is shutdown ~~for maintenance~~. Records shall be kept to show when the thermal oxidizer is not operational. A control efficiency of 0% for the thermal oxidizer shall be used to calculate actual emissions from each emission unit or control device exhausted to the thermal oxidizer when the oxidizer is not in operation;"

Division's response: The Division concurs with the comment and has revised the permit as requested.

32. 6. Source Recordkeeping Requirements: g. h. and i. (page 59 of 73)

Remove these requirements because they are redundant as described in our comment on **5. Source Monitoring Requirements: d.** and **e.**

Division's response: It is believed that the reference was for 5.h and i. The Division concurs with the comment and has revised the permit as requested. Also see the response to comment 30.

33. 7. Source Reporting Requirements: a. (page 60 of 73)

Make the following text change (additions in **bold** and deletions with a ~~strikethrough~~):
"The permittee shall report the Division's Paducah Regional Office in accordance with Section F.5 and F.6 **whether** the production of Carbopol® using each of benzene, ethyl acetate, and cosolvent as the respective carriers **complies with 1. Operating Limitations**."

As described in a previous comment, actual production rates are considered by Noveon to be a trade secret. Revealing actual production rates might provide some competitors an unfair advantage. Actual 12-month production rates recorded per **5. Specific Recordkeeping Requirements** will be maintained onsite for inspection by the Division.

Division's response: See response to comment 7. There is no change to the permit due to this comment.

Conditional Major Permit- Section E (Source Control Equipment Requirements)

34. Specific Control Equipment Operating Conditions: 2.a. (page 61 of 73)

Make the following text change (additions in **bold** and deletions with a ~~strikethrough~~):
"The polymerizers (RE-7N2, RE-6N2, RE-4N2, RE-3H, RE-1H, RE-3N1, RE-5N2, RE-1N, RE-2N, RE-2H, RE-1G, PLY-1N4, PLY-2N4, PLY-21E, PLY-22E, PLY-23E, PLY-24E, PLY-25E, PLY-26**, PLY-27E, PLY28E**), blowdown tanks (TK-10N2, TK-5N1, TK-107N, TK-4H, TK-11N2, TK-3N, TK-103P, TK-5H1, TK-23G, TK-25G, TK-1N5, TK-21G, TK-22G, TK-24G, TK-3N- alternate use) and dryers (DR-2P1, DR-1P1, DR-3H1, DR-2H, DR-1H, DR-101P, DR-100P, DR-1PA, DR-2PA, DR-3PA, DR-21H, DR-22H, DR-23H, DR-24H, DR-25H, DR-26H, DR-27H, DR-28H, DR-29H, DR-30H, DR-31H, DR-32H, DR-1P3, PLY-27E, PLY-28E, DR-33H, DR-34H), all identified as EP C01, shall be controlled when operating in benzene service by the regenerative carbon system (AC1) at all times that the emission units are operating in benzene service. Emissions from AC1 shall exhaust to the thermal oxidizer when the oxidizer is in operation."

Division's response: The Division concurs with the comment and has revised the permit as requested.

35. Specific Control Equipment Operating Conditions: 2.e. (page 62 of 73)

Make the following text change (additions in **bold** and deletions with a ~~strikethrough~~):
"The stripper feed tank (TK-1F) and process stripper (CL-1F), identified as EP C06, shall be controlled by the regenerative carbon system (AC1) at all times that the emission units are in operation and exhausted to the thermal oxidizer when the oxidizer is in operation. ~~When the thermal oxidizer is down emissions shall be vented to a carbon canister.~~"

The last sentence in this section was not correct.

Division's response: The Division concurs with the comment and has revised the permit as requested.

36. Specific Control Equipment Operating Conditions: 2.f. 1. (page 62 of 73)

Make the following text change (additions in **bold** and deletions with a ~~strikethrough~~):
"The permittee shall install, calibrate, maintain, and operate the regenerative carbon bed and the computerized ~~distribution~~**distributed** control system (DCS), which monitors the benzene concentration and flow rate downstream of the regenerative carbon bed, in accordance with ~~manufacturer's specifications and procedures outlined in the operating plan submitted to the US EPA on December 13, 1989 (revision submitted on December 20)~~ **the operating plan submitted to the Division in accordance with 40 CFR 51.272(c)(1), unless the plan was modified by the Division during the approval process. In this case, the modified plan applies**."

Division's response: The Division concurs with the comment and has revised the permit as requested.

37. Specific Control Equipment Operating Conditions: 2.f. 2. and 3. (page 62 of 73)

Please remove these requirements because they are redundant as described in our comment on Section B 5.d. and e. Additionally, the regenerative carbon beds were an in-house design and therefore manufacturer's specifications are not available.

Division's response: The Division concurs with the comment and has revised the permit as requested. Also see the response to comment 30.

38. Specific Control Equipment Operating Conditions: 2.f. 4**.** (page 62 of 73)

Make the following text change (additions in **bold** and deletions with a ~~strikethrough~~):
"The permittee shall ensure that desorbed hydrocarbons from regeneration of the off-line carbon bed shall be **recovered or** vented to the thermal oxidizer."

Division's response: The Division concurs with the comment and has revised the permit as requested.

39. Specific Control Equipment Operating Conditions: 2.f. 5. (page 62 of 73)

Make the following text change (additions in **bold** and deletions with a ~~strikethrough~~):
"The ~~manufacturer's specifications and the~~ standard operating procedures shall be located onsite at all times."

Division's response: The Division concurs with the comment and has revised the permit as requested.

40. Specific Control Equipment Operating Conditions: 2.g. 6. (page 63 of 73)

Make the following text change (additions in **bold** and deletions with a ~~strikethrough~~):
"The thermal oxidizer shall **not** be **shutdown** ~~in operation at a minimum of 6,832~~**more than 1,927** hours per year **while the plant is operating, and shall operate** with the average combustion chamber temperature ~~of the oxidizer~~not more than 28°C (50°F) below the average combustion chamber temperature established during the most recent performance test."

Division's response: The Division concurs with the comment and has revised the permit as requested.

41. Specific Control Equipment Operating Conditions: 2.h. (page 63 of 73)

Please remove this requirement. This requirement is not specific as to what to inspect, is not consistent with control system requirements in other Kentucky permits, and appears redundant in light of requirement 1. of Section E.

Division's response: The Division concurs with the comment in that the requirement is redundant with Condition 1 of Section E. As such, the permit is revised to remove this redundant requirement. However, in complying with Section E, the permittee is still required to demonstrate that the pollution control equipment (i.e., regeneration carbon adsorption system and thermal oxidizer) is being maintained and operated in a manner acceptable to the Division. As indicated in the condition, such can include periodic equipment inspections and preventive maintenance. It is the responsibility of the permittee to develop the appropriate preventive maintenance program for their related production and control equipment in order to ensure said equipment is operating in a manner consistent with good engineering practices for emissions minimization.

Permit Application Summary Form

42. Add the following dates to the "Date application received:" June 6, 2004 and September 7, 2006.

Division's response: The Division acknowledges this comment and is aware of the receipt of additional information to supplement the full application submittals made by the permittee on December 19, 2003 and March 14, 2006. The Division has revised the Permit Application Summary Form to indicate the dates that supplemental information was received related to the permit application.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.